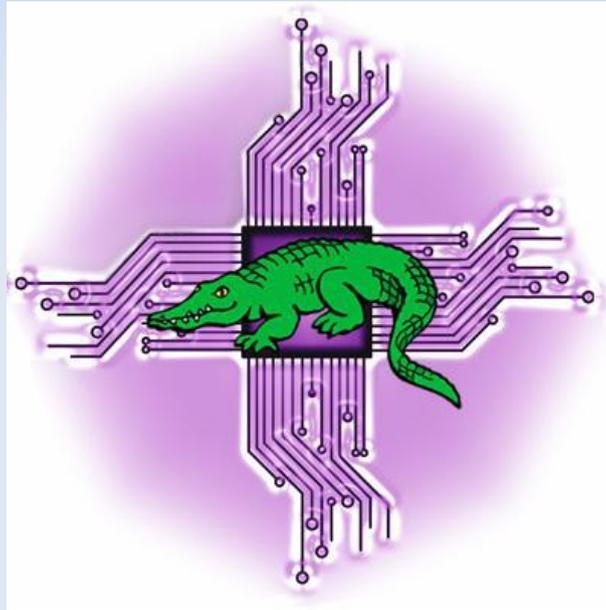


Educating People to Become Linux Users

Presentation to Linux Users of Victoria, Inc.



July 7th, 2015

<http://levlafayette.com>

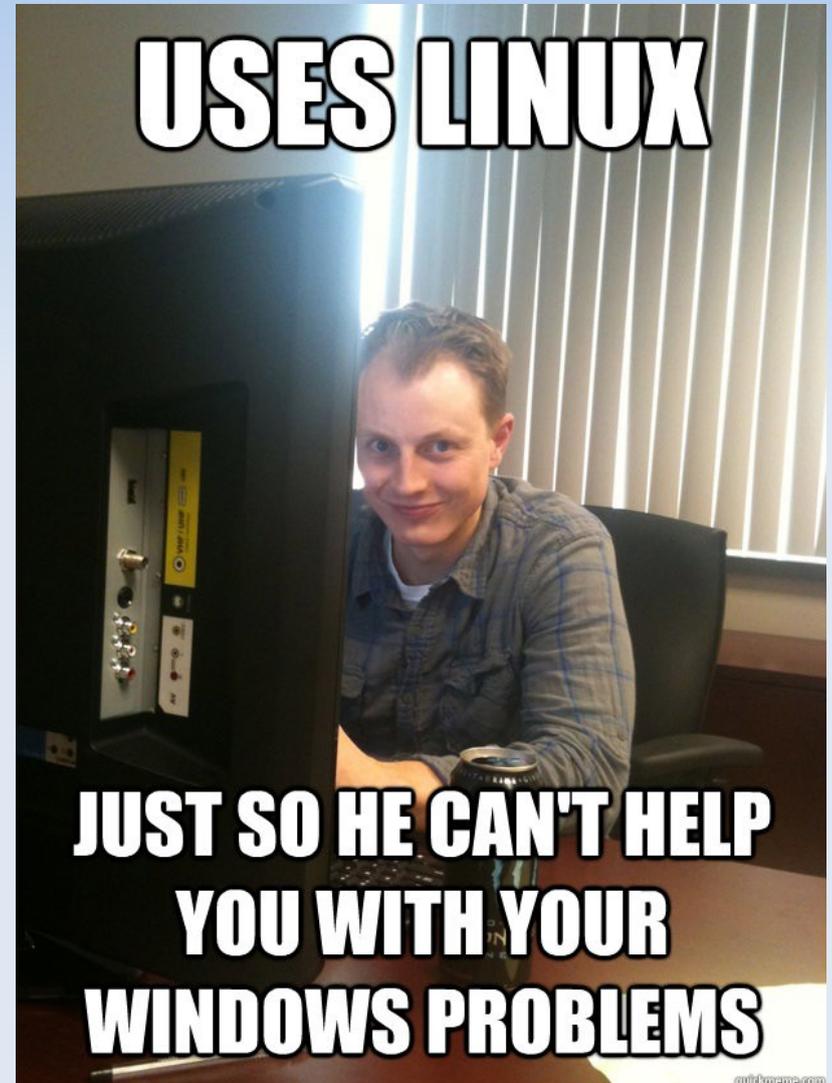
Linux and User Education

Our time is precious. Better users means less trivial problems.

More people using Linux means better economic and technological outcomes.

User education requires disposition and knowledge, both of the subject and of education!

Applicable to ad-hoc and systemic instances.



Convincing Others to Use Linux

Ideological - some people are motivated by the "free and open source" aspect.

Technical - some people are motivated by the technical superiority to other operating systems.

Employability - there are excellent and varied job opportunities for those who have good Linux skills.

Community - there is a vibrant and interesting community directly and indirectly related to Linux.

Utility - Linux is useful even many other ways (troubleshooting, home automation, home file servers)

Required - Work or research requirements means that the learner **must** use Linux.

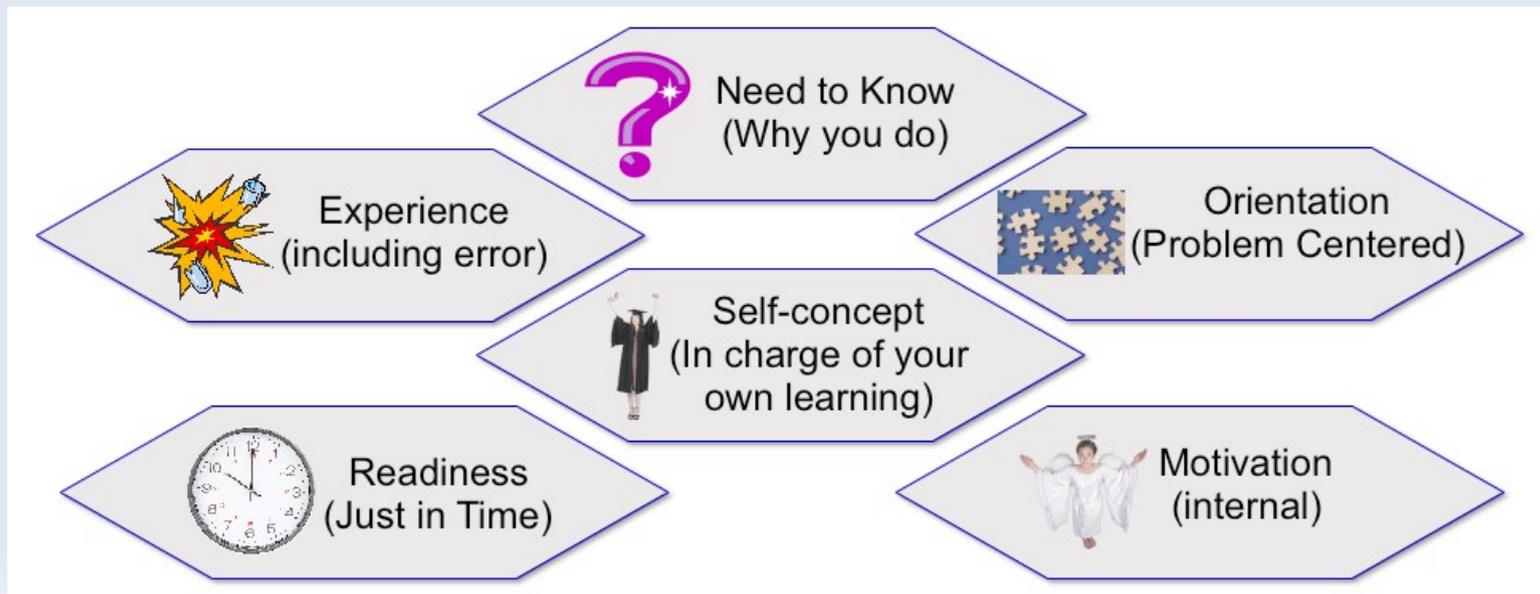


Andragogy and Lifelong Learning

The adult learner has different characteristics to the child learner. (1) autonomy of direction in learning and (2) the importance of the use of personal experience as a learning resource.

Lifelong Learning: The industrial-era lifepath (finish school, studying or training for a particular career or job, and then remaining in that job until retirement), no longer holds true.

People use different mechanism for immediate goals compared to future goals. Need to discover what motivates a person to engage and persist in a learning experience.



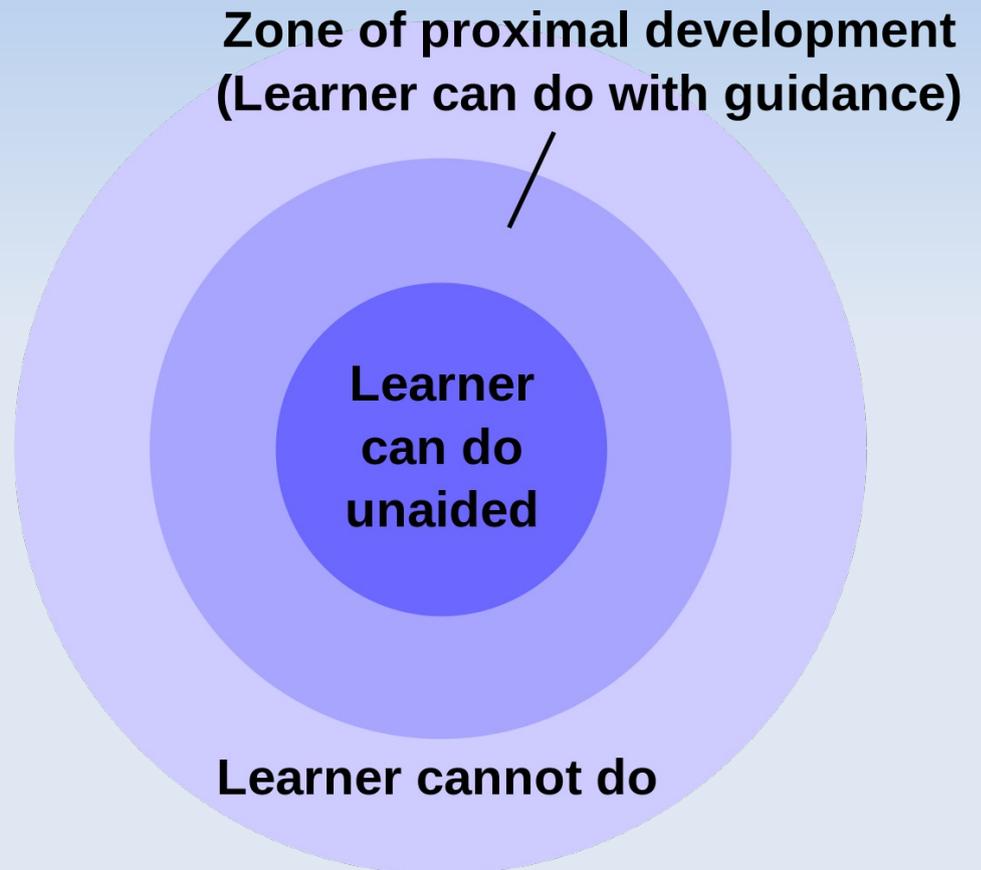
Structured Disciplinary Content

Content needs to be organised in terms of objectives, timed, and revised! Content needs to be provided in as 'structural knowledge'. Provide grounding to a concept (facts *and* reasons).

Teach the concepts and practise as it allows the learner to elaborate their knowledge into new constructions.

Delivery should make use of discipline-based learning styles. For computer use, connectivism (e.g., pair programming) and direct usage ("yield to the hands-on imperative").

The learner-teacher environment is most effective in the "zone of proximal development".



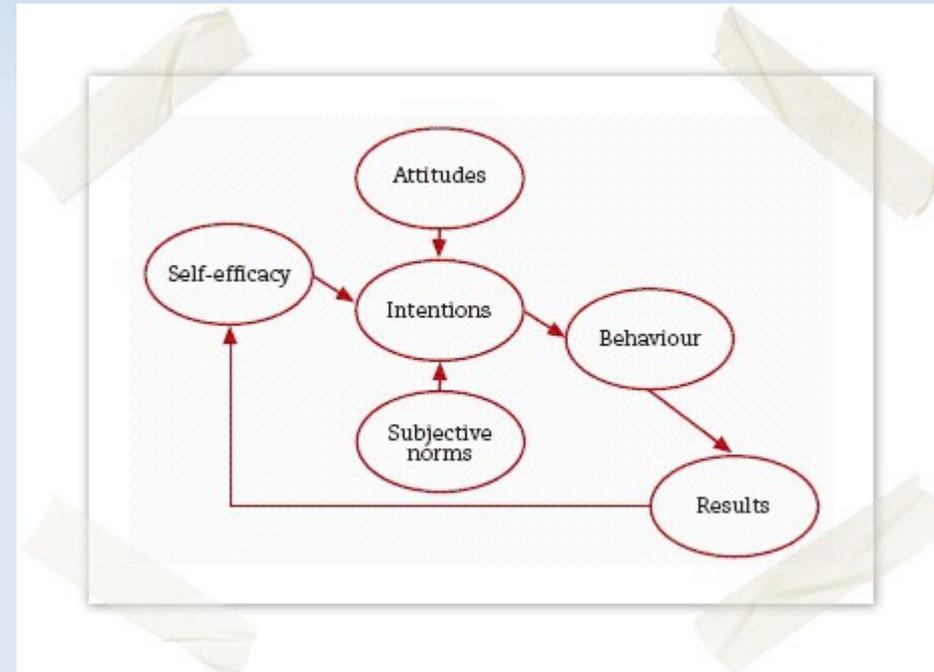
Self-Efficacy and Engaging the Community

Attention to content and delivery will lead to learner self-efficacy (i.e., the learner's knowledge and belief in their own abilities).

It *should* calibrate with performance and often is close among adult learners. The learner with a high calibration between self-efficacy and performance will also have accurate attribution for their performativity.

An adult learner who has a high level of self-efficacy is also likely to also have a higher level intrinsic motivation.

In addition to this, they are also likely to participate in a "community of practise", whether this is a social or workplace location.

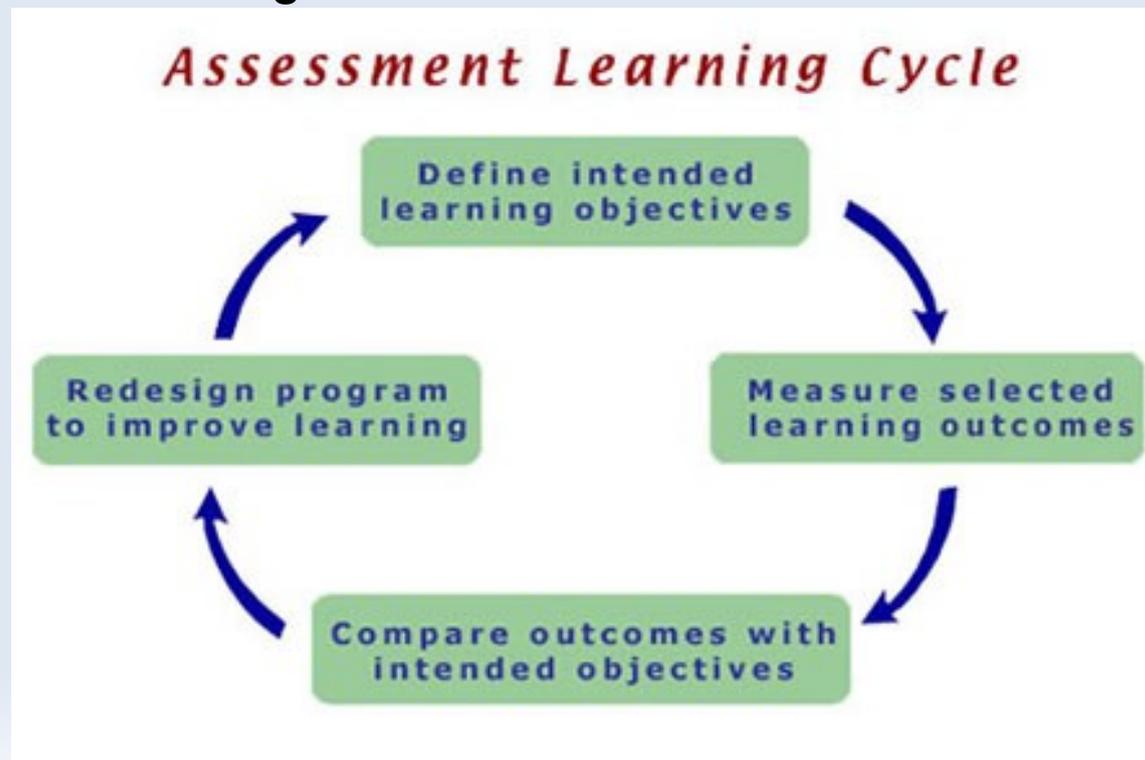


Evaluation

Ensure that the material is contextually relevant, attainable, is frequently tested, with plenty of explanatory feedback. Select material that can be actually used by the learners in their life, or at least approximates it.

Selecting several small items of assessable material is much better than one large one.

Positive feedback encourages and satisfies. Negative feedback discourage and threats will be treated with utter contempt with adult learners. Don't say "You are wrong", rather, show what is right.



A Scoreboard

As an example; VPAC teaches postgraduate researchers how to use Linux and HPC clusters. RMIT and LaTrobe started roughly equal in terms of usage.

Change in cluster saw significant increase in usage from both partner institutions... but the one which make use of HPC training improved *much* more.

Trifid Usage (CPU Hours) to December 31st 2014

Year	RMIT	La Trobe	Cluster
2012	1,729,837h	1,719,554h	Tango
2013	8,108,695h	3,301,052h	Trifid
2014	9,760,919h	4,964,297h	Trifid

Trifid Course Enrolments to December 31st 2014

RMIT enrolments 229

La Trobe enrolments 29